

## **MULTI-MODE AMPLIFIER SYSTEM**

### **ABSTRACT**

*An amplifier system is provided that switches between a linear mode of operation, an envelope tracking mode of operation and a polar mode of operation. The amplifier system switches between modes of operation based upon a characteristic of an input signal relative to a first threshold level and a second threshold level. A mode selector selects the operation mode by transmitting an amplitude modulated signal plus a variable headroom voltage to a supply terminal of a power amplifier during the envelope tracking mode, an amplitude modulated signal to the supply terminal and phase modulated input signal during the polar mode and a substantially constant amplitude signal to the supply terminal during the linear mode.*